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TULSIRAMJI GAIKWAD-PATIL College of Engineering & Technology

(Approved by AICTE, New Delhi and Govt. of Maharashtra & Affiliated to MSBTE, Mumbai)

POLYTECHNIC

DEPARTMENT OF ELECTRICAL ENGINEERING

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NEWSLETTER

SESSION: 2023-24 (EVEN)

GAIKWAD-PATIL GROUP OF INSTITUTIONS

YOUR DREAM IS OUR MISSION

B.Tech | B.Arch | M.Tech | MBA | MCA | BBA | BCA | Polytechnic | B.Pharm | D.Pharm | BAMS | B.Sc Nursing | GNM Nursing | Physiotherapy | Ph.D

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Vision of the Institute

To emerge as a learning Center of Excellencein the National Ethis in Diploma in Engineering.

Mission of the Institute

M1: To elevate the standards of students through ethical practices.

M2: To provide facilities and services to meet the challenges of Industry and Community.

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M3: To ascertain holistic development of the students and staff members by inculcating knowledge and profession as work practices.

Vision of the Department

To Emerge as a learning Centre in the Domain of Electrical Engineering

Mission of the Department

M1: To impart quality technical education through effective teaching & learning process.

M2: To provide learning environment to face societal and industrial challenges of Electrical Engineering

M3: To ensure overall development of students and staff members by inculcating knowledge and professional ethics as a part of lifelong learning.

About TGPCET

Tulsiramji Gaikwad-Patil College of Engineering and Technology Polytechnic (TGPCET) was established in the year 2013 by Vidarbha Bahu-uddeshiyaShikshan Sanstha (VBSS), a registered society. It is a self-financed Private Engineering College, which is affiliated to Maharashtra State Board of Technical Education Mumbai and is approved by All India Council for Technical Education, New Delhi. Also, college is approved by Directorate of Technical Education (DTE), Mumbai, Maharashtra State.

About Department

The Department of Electrical Engineering provides in depth education & prepares its students for all the possible future career & developments in technology. Department has a fine blend of experienced as well as young dynamic enthusiastic personalities as faculty for providing quality education. The specious infrastructure, well equipped laboratories, meritorious students and academically qualified and enthusiastic faculty being the salient features of the Department.

HOD's Desk

Mr. Ganesh Wakte

HOD, EE, Polytechnic

Welcome to the Department of Electrical Engineering of TulsiRamji Gaikwad-Patil College of Engineering and Technology, Polytechnic, Nagpur. We started our journey in the year of 2013.Over the last 11 years, we have grown our Expertise & competence in the core Electrical Engineering curriculum. Electrical Engineering department aims to nurture young talents with technical training to tackle real-world challenges. With a blend of experienced faculty, the department focuses on theoretical and practical approaches. The department has well-equipped laboratories and provides opportunities for collaborative growth through its technical society, "TECHNO-SPARK". The goal of this newsletter is to keep you updated with developments in Electrical Engineering Department of TGPCET Polytechnic. This department is continuously undergoing transformation. New initiatives have been launched related to academics, student affairs, extracurricular activities. The students & faculty members of the department are sincerely participating in various activities organized at institute or at other places. It is elevating to see the sound performance of students. I offer best wishes for future activities. At last, I thank to the editors of SPARK for their sincere efforts & I offer my best wishes to the readers of this newsletter.

PEO's, PSO's & PO's

Programs Educational Objectives:

PEO 1. Provide socially responsible, environment friendly solutions to Computer engineering related broad-based problems adapting professional ethics.

PEO 2. Adapt state-of-the-art Computer engineering board-based technologies to work in multi-disciplinary work environments.

PEO 3. Solve broad-based problems individually and as a team member communicating effectively in the world of work

Programs Specific Outcomes:

PSO 1. **Computer Software and Hardware Usage:**

Use state-of-art technologies for operation and application of computer software and hardware.

PSO 2. **Computer Engineering Maintenance:**

Maintain computer engineering related software and hardware system.

Programs Outcomes (PO's):

1. Basic and Discipline specificknowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.

2. Problem analysis: Identify and analyze well-defined engineering problems using codifiedstandard methods.

3. Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

4. Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standardtests and measurements.

5. Engineering practices for society, sustainability and environment: Apply appropriate technology in context of society, sustainability, environment and ethical practices.

6. Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

7.Life-long learning: Ability to analyze individual needs and engage in updating in the contextof technological changes.

Industrial Visit

Department of **Electrical Engineering** have organized an Industrial visit at Industrial Visit at MSEDCL, Nandanwan, Nagpur Maharashtra.

Aim: To provide students with practical exposure to power distribution systems and substation operations.

Department of Electrical Engineering of Tulsiramji Gaikwad Patil College of Engineering & Technology, Polytechnic, Nagpur student visited “Industrial Visit at MSEDCL, Nandanwan, Nagpur”. During the visit, students observed the functioning of critical equipment such as transformers, circuit breakers, and SCADA systems, gaining real-time understanding of load management and fault handling. This experience effectively bridged theoretical knowledge with industry practices, enhancing their grasp of power system engineering.

Industrial Visit

Department of **Electrical Engineering** have organized an Industrial visit at INDUSTRIAL VISIT AT SONALI TRASNFORMER HINGANA, NAGPUR' Maharashtra.

Aim: To gain practical experience and understand real-life industrial exposure under ISTE and IEI initiatives.

Department of Electrical Engineering of Tulsiramji Gaikwad Patil College of Engineering & Technology, Polytechnic, Nagpur student visited "Industrial Visit at Sonali Transformer Hingana, Nagpur". Students were given a detailed induction session about the visit and its significance. A dedicated session was held where students interacted with engineers and supervisors. Real-time demonstrations were conducted for: Transformer testing procedures (such as insulation resistance, voltage ratio, and short circuit tests).

Guest Lecture

Aim: Expert Lecture on the design, components, and layout of electrical substations for efficient and safe power transmission and distribution.

The aim of this expert lecture was to provide students with a comprehensive understanding of electrical substation design and layout, enabling them to apply this knowledge in real-world power system applications. The Guest speaker for the session was Mr. Sagar Harpale, Dy. Executive Engg. MSEDCEL, Substation Koradi Nagpur. Explained about the Switchgear and Protection of power system in Substation and also described that the power substations are an essential part of the electrical power grid.

Aim: Expert Lecture expert lecture was to provide students with a comprehensive understanding of the design and working principles of transformers, enabling them to apply this knowledge in practical, real-world power systems.

The Guest speaker for the session was Mr. Harshad Nalhe, Assistant Engineering MSPGCL, Nagpur. He delivered the session on basics of Electrical Safety and put up lime light on important aspects of Maintenance practices in Industries. He guided the students about overall Safety and working of different sections of Substation.

Guest Lecture

Aim: Expert lecture to equip students with a strong foundation in AutoCAD and advanced design techniques using Autodesk Fusion 360.

Mr.Tembhurne covered essential topics including 2D drafting in AutoCAD, and advanced 3D modelling, simulation, and collaborative features of Fusion 360. Students gained practical skills and valuable insights into the industrial applications of CAD tools, aligned with various Program and Specific Outcomes (POs & PSOs) such as problem analysis, solution design, engineering tools, communication, sustainability, and simulation. The lecture enhanced students' design capabilities and understanding of modern engineering tools, making it a highly beneficial learning experience.

Aim: Personality development Lecture to understand the importance of campus recruitment training in developing essential skills, confidence, and professionalism for successful placement and career growth.

The lecture was delivered by Dr. Nitin Chore, a renowned expert in the career development and campus recruitment. He emphasized his lecture directing the students to overall idea about problems on Data Arrangements and Blood Relations, Number Systems and concept of practical session on PI. The aim of the lecture was to emphasize the significance of campus recruitment training for students, enabling them to prepare for and succeed in competitive job market.

Workshop

WORKSHOP ON DESIGN OF ELECTRICAL INSTALLATION

The Department of Electrical Engineering organized a Workshop on “Design of Electrical Installation” conducted by Mr. Devashish Joshi, Chartered Engineer and Proprietor of MNJ Consultants. The workshop aimed to equip participants with in-depth knowledge of electrical installation design, covering planning, safety, and regulatory compliance. Key topics included load calculations, circuit design, safety measures, and adherence to standards like the NEC and Indian Electricity Rules. The session enhanced participants' practical skills and confidence while aligning with Program Outcomes PO2, PO3, PO4, PO6, and PO7. The workshop was highly effective in bridging academic knowledge with real-world electrical design practices.

NSS Activity

YOUTH DAY CELEBRATION

Department of Electrical Engineering, Polytechnic Tulsiramji Gaikwad-Patil College of Engineering and Technology, Nagpur has organized “YouthDay”,under NSS activity on the 12 January 2024. The National Youth Day has celebrated with great enthusiasm in our College under National Service Scheme Unit in association with Internal Quality Assurance Cell. The event aimed to engage and empower the youth through various activities and competitions. The program included Donation Drive of used or new clothes and blankets to the needy people, Yuwa Dud, Street Play Competition ,and Speech Competition.

Departmental Activity

ECO-CRAFTING

The Department of Electrical Engineering, Polytechnic, Tulsiramji Gaikwad-Patil College of Engineering and Technology, Nagpur, organized an Eco-Crafting Competition on 30th September 2023. The event was conducted in collaboration with professional bodies IEI, ISTE, and PHONIX. The initiative aimed to promote sustainable practices through creative and purposeful crafting using recyclable materials. The competition provided a platform for students to showcase their creativity while raising awareness about environmental conservation.The aim of the event was to instill eco-consciousness among students by encouraging them to repurpose waste materials innovatively and sustainably.

Departmental Activity

BEYOND THE CLASSROOMS STUDENTS SPEAK

The Modern Solar Water Purifier project aims to provide an eco-friendly, cost-effective, and sustainable solution for clean drinking water using renewable energy. This innovative system harnesses solar energy to purify contaminated water through a combination of distillation and filtration processes. Solar radiation heats the water, facilitating evaporation and condensation, which effectively removes impurities, salts, and microorganisms. The addition of modern components such as photovoltaic panels, sensors, and automated temperature control enhances efficiency and reliability. The project emphasizes the use of green technology to address water scarcity and pollution challenges, particularly in rural and remote areas lacking access to conventional power sources. By integrating solar technology with modern purification techniques, this project contributes toward achieving sustainable development goals and promoting environmental conservation.

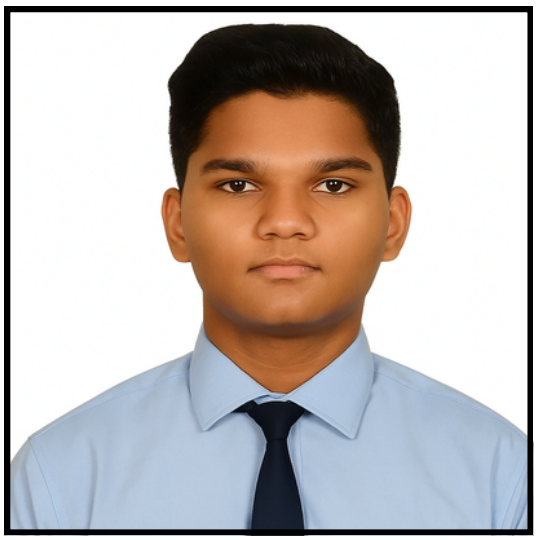
- Himanshu Kumbhalkar

The Wireless Projector Project focuses on developing a modern, user-friendly projection system that eliminates the need for wired connections, thereby enhancing convenience and flexibility in presentations. The system utilizes wireless communication technologies such as Wi-Fi or Bluetooth to transmit multimedia content from laptops, smartphones, or other devices directly to the projector. This innovation aims to improve efficiency in classrooms, offices, and conference environments by enabling seamless connectivity and mobility. The project also integrates features like real-time data transfer, multi-device support, and energy-efficient components. By adopting wireless technology, this project contributes to reducing cable clutter, improving aesthetics, and promoting a smarter and more connected workspace.

- GAMESHAR BISEN

Academics Topper

Mayur Balpande
2nd Semester
74.00%



Kunal Chavare
4th Semester
78.80%

Gameshwar Bisen
6th Semester
89.00%

Students Participation

PAPER PRESENTATION CERTIFICATES

International Journal of Engineering and Creative Science

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Impact Factor - 4.013

Certificate

This Certificate is awarded to

Himanshu H. Kumbhalkar

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GAIKWAD-PATIL GROUP OF INSTITUTIONS

Courses we Offer:

- Computer Science & Engineering
- Information Technology
- Civil Engineering
- Mechanical Engineering
- Electrical Engineering
- Electronics & Communication

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Tulsiramji Gaikwad-Patil College of Engineering and Technology. Mohagaon, Wardha Road, Nagpur, 441108 Maharashtra, INDIA.